

The New Office of Environmental Management's Site Closure Program  
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## **ABSTRACT**

The U.S. Department of Energy's Office of Environmental Management (EM) is responsible for the management of sites and facilities contaminated during, and wastes generated as a result of, the Cold War. Past operations resulted in radioactive, hazardous, and mixed wastes and contamination at these sites. EM's mission is to treat and dispose of these wastes, and eliminate, or reduce to safe, prescribed levels, any risks to human health and safety or the environment that may be posed by these contaminants.

Since EM was established in 1989, it used a program office structure to address its specific activities: waste management, environmental restoration, technology development, and nuclear materials stabilization. In late 1999, EM reorganized to better focus on the completion of its mission on a site level (i.e., waste management and site cleanup), and to enable closer coordination between Headquarters and the Field activities. Under the new EM organization, the Office of Site Closure is now responsible for the entire missions of waste management, environmental restoration, and nuclear materials stabilization at seven of EM's twelve Operations Offices.

This paper will describe the Site Closure Program, with an emphasis on new approaches to be taken and tools to be applied to accelerate completion of EM's cleanup responsibilities. The paper also puts forward some specific challenges to DOE's contractor community, and to the Site Closure Program itself, inviting the DOE and its contractors to meet these challenges.

## **INTRODUCTION**

The Department of Energy's (DOE's) Office of Environmental Management (EM) is responsible for addressing the legacy of the Cold War - remediating sites and disposing of the wastes resulting from the nation's 50 years of nuclear weapons research, development, and production. These activities include: storing, treating, and disposing of waste; characterizing, assessing, and remediating or stabilizing contaminated soil or groundwater; and decommissioning facilities used during the Cold War or during EM's remediation activities.

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encompass work at 110 of EM's 113 sites. These sites include everything from legacy waste storage, treatment, and disposal to managing nuclear materials processing facilities and closed nuclear reactors to remediating large tracts of land with soil or groundwater contamination.

## **A SHIFT IN FOCUS**

The Office of Site Closure sees the reorganization as an opportunity to refocus on our core mission - achieving site cleanup. We have articulated a vision to support this mission:

- The Site Closure Program will set the standard for safe, cost-effective closure of nuclear facilities
- The Site Closure Program will be the model for how to transition government activities from operations to closure
- The Site Closure Program will start with a clean slate - what doesn't work will be discarded; what works will be applied and improved.

To achieve this vision, we are redirecting our program to have the sole focus of closing sites. We have also identified some key tools that will enhance our ability to achieve this vision. These tools are:

### **Contracting Approaches**

We are writing new contracts, and incorporating incentives into existing contractors, to focus on getting the job done. We will not reward the status quo, but will reward those contractors that can help us close sites on time and within cost. The largest rewards will go to those that accelerate cleanup.

For example, we recently signed a new contract addressing the cleanup at Rocky Flats. In this contract, Kaiser Hill (the site Integrating Contractor) agreed to a target closure date of December 15, 2006 for the site. In addition, fee incentives for accelerating site closure to March of 2006 are included in the contract, as are fee penalties for delayed closure. Of course, in order to ensure we knew exactly what had to be done on the schedule and cost we identified in the contract, DOE and Kaiser Hill agreed to a baseline against which schedules and costs will be measured.

We are also in the process of selecting a new contractor for our Fernald operations. We will be able to discuss more of the details of this contract after the RFP is issued, which should be in early 2000.

### **Programmatic Integration**

We are looking at ways in which sites can help other sites achieve closure. For example, we are seeking the timely shipment of materials from Rocky Flats to Savannah River to permit Rocky Flats closure to proceed on the scheduled we just agreed to in our new contract.

We are also looking at ways to optimize our activities across sites, not only so we can learn from each other, but so we can sequence events in such a way as to minimize costs. For example, if we have limited volumes of similar wastes requiring treatment at several sites, treatment schedules can be sequenced to enable a contractor to move from site to site with a single mobile treatment facility, rather than requiring multiple contractors or multiple treatment units. Such sequencing will reduce our costs while we make progress in achieving our site closure end points.

Finally, in the 1999 reorganization, EM created the Office of Integration and Disposition to better focus on the integration of the overall EM mission. We will work with this new Office to perform the analyses and reach the agreements necessary to close our sites as quickly and safely as possible. We believe EM's new "one site, one voice" organizational structure enables us to work more effectively at the multi-program sites such as Albuquerque, Chicago, Oakland, and Oak Ridge, and provide for the integration between EM and other DOE Programs, such as Defense Programs, Science, and Nuclear Energy, to focus on getting the job done.

Specific integration challenges include: transuranic waste shipments from small sites; assuring that we have waste contracts and strategies in place to move materials we will be generating; and working with material receiving programs on packaging and transportation issues.

### **Administrative Streamlining**

Our objective is to reduce non-safety-related policies and procedures which might make sense to a site with an ongoing mission, but have little value for sites going out of business. For example, most sites prepare multiple annual reports to a variety of organizations focusing on varying aspects of site activities. As site closure nears, the detail in these reports can be greatly diminished, or the report may even be able to be eliminated. This will enable us to focus more of our workers and budgets on completing site cleanup.

We also will work with the Office of Management and Budget and Congress to develop proposals for streamlining the budget process to focus more on site closure. Now that we have meaningful baselines, we hope to spend more effort on achieving site closure and less on obtaining a budget. Our approved baseline schedules and costs will serve as our best budget justification.

### **Improved Technologies**

We will work to more closely integrate with EM's Office of Science and Technology to demonstrate and deploy new and improved technologies to our challenges. Our specific activities include continuing to apply new and improved technologies to our sites, and sharing the results both across the DOE complex, and with commercial industry.

We also will streamline our technology implementation activities. We have made huge strides in integrating the technology developers with the technology users. An example of our success is the application of an integrated technology suite for cost-effectively delineating radioactivity in

soils to support removal actions at Fernald. This technology suite enabled us to achieve challenging schedules, and is projected to save more than \$30 million by 2006. But we will work to do even better, focusing on technologies that can be applied in the near term to provide clear schedule or cost improvements.

### **Regulatory Streamlining**

As a result of working with our regulators over the past ten years, our relationship had evolved to where our focus was often on achieving a compliance agreement to ensure all parties understood their commitments. While this is an important aspect of achieving cleanup, we believe it too often became the end in itself - rather than focusing on getting to site closure, we were focused on getting a signed agreement for HOW we would get to site closure. Therefore, we plan to shift our interactions with our regulators from a focus on compliance agreements to end point achievement - site closure.

In order to achieve site closure more quickly and cost-effectively, we plan to invoke our CERCLA removal authority more often. This authority enables us to move directly into the field and begin contaminant removal, rather than develop the full suite of CERCLA documents prior to field work. We believe this new emphasis on removals will speed the cleanup process, enabling us to complete sites more quickly than was possible using our previous approaches.

### **MEETING OUR CHALLENGES**

Anyone familiar with environmental cleanup, whether performed by the government or by industry, will recognize that tight budgets are a reality. To some extent, we were shielded from this reality during the early years of the EM program, due to escalating budgets over the first few years, and later by the need to produce documentation rather than perform cleanups. But those days are behind us. Digging dirt or taking down highly contaminated buildings costs more than performing studies and preparing documents. Some of our larger projects (such as D&D of the processing facilities at Rocky Flats or building the disposal cells at Weldon Spring and Fernald) require substantial budgets. Yet, since our budget is likely to remain flat, we must become more efficient. While accomplishing some of our activities earlier will reduce out year mortgages, and thereby free up funds, in the near term there is no doubt that working within our existing budget will be a significant challenge.

Many of the easy solutions have been employed during EM's earlier re-engineering efforts. So to achieve success within these budget constraints, we will have to become more effective at integration. We will work with our regulators and other stakeholders to prioritize not just a single site's activities, but activities across all of our sites, so we can apply our limited funds to where they can accomplish the most good, reduce out year mortgages, and thereby take advantage of the reduced post-closure funding needs.

## **APPROACHES AND TOOLS FOR OUR NEW FOCUS**

### **Baselines**

In order to challenge ourselves and our contractors, we need to know both the current status of our program AND our planned end point. Because of our previous emphasis on baselines, we can now use these established baselines to develop accurate estimates of what it should cost to accomplish these activities. Further, through our closer integration between sites and with industry, we can learn from each other and apply these lessons learned to control our costs. Finally, these baselines will encourage contractor innovation, since a major portion of contractor fees will come from accomplishing work faster or more cost-effectively than identified in the baseline.

### **Safe Operations**

Our contractors know that our number one priority is to accomplish our work safely. Through continued application of the Integrated Safety Management System, we expect our contractors to achieve cost and schedule reductions AND safe and efficient operations. For this, they will be rewarded.

### **Integration**

Recognizing the importance of integration in achieving our vision, EM specifically established an Office of Integration and Disposition in the new organization. But we know that integration isn't something we can look to a sister office to accomplish - it is a key part of OUR responsibility. So we will continue to work closely with other DOE programs, both internal and external to EM. For example, we learned by working closely with DOE's Office of Science that transition of surplus facilities from their original program to EM could save money and allow more efficient integration of site-wide EM activities. We will continue to seek opportunities to reduce costs and streamline activities.

Additionally, integration enables us to learn not only from DOE activities across the complex, but also from non-DOE activities. For example, a number of commercial entities have recently decommissioned, or are currently decommissioning, nuclear facilities, including reactors. We can learn from and improve upon them, not only about reactor decommissioning, but also lessons that can be applied to decommissioning other facilities. Likewise, as EPA completes more of its Superfund sites, we can learn of the specific technologies applied to hazardous contaminants that also exist at our sites.

Finally, we look to interact even earlier and more effectively with our regulators and other stakeholders so we can better focus on site closure. This clear focus will help us reduce our costs and achieve more rapid site closure.

## CONTRACTING OPPORTUNITIES

The Site Closure Program will continue to use contractor personnel to perform actual site cleanup activities. However, contractors anticipating “business as usual” need not bid on our new contracts. We are implementing DOE’s new procurement strategies - performance is directly tied to fees. Specifically, contractors have an opportunity to earn large fees for great performances. However, they also have the opportunity to earn no, or even negative fees, for poor performance.

Examples of these contracts include Brookhaven, where the M&O will be rewarded for reducing total project cost based on the validated baseline, and the Rocky Flats contract, where the contractor can **earn** as much as \$120 M by accelerating site closure, or they can **lose** as much as \$190 M if site closure is delayed.

We also expect to seek more fixed price contracts, and look to our M&O’s and our integrating contractors to do so also. We WANT contractors to demonstrate their capabilities. The EM program is very large, and will continue for a number of years. Demonstrating capabilities today will likely result in numerous opportunities to demonstrate those same capabilities at other sites on other projects in the future.

We will also be working with our contractors to develop milestones and performance fees that are realistic, attainable, and challenging. To get an incentive award, a contractor must do MORE than the contract requires. Simply fulfilling the objectives is expected, and a contractor that does this will be rewarded with a “C”. To get an “A”, a contractor must exceed the expectations, either by achieving results more quickly, with less cost, or (ideally) both.

## UPCOMING CHALLENGES

It is the mission of the Office of Site Closure to “go out of business”. That makes us different than most organizations, either in or out of government. And this difference provides us with specific challenges.

For example, many of our workers helped our country win the Cold War. In return, DOE has helped them transition from production jobs to environmental cleanup jobs. And while these cleanup jobs do provide them skills which may be applicable to other industries or other locations, we still recognize that there is the potential for job loss and community economic impacts when we shut down our sites. These workers will not be cast off, but will receive our support in transitioning from government contract work to entirely new non-government jobs. An example is school tuition support to enable a worker to learn a new set of skills. Another example is the incentives offered to DOE’s privatization contractors to hire workers likely to be displaced as site cleanup comes to completion.

We must continue to work with our stakeholders, including regulators, to identify future land use for our sites. Clearly, not every site with contamination will end in a “green field”. But we must get more specific, and identify which specific locations will be cleaned to a green field end state,

and where contamination will be isolated in place. For those sites with contamination remaining after we complete our mission, EM will work with the stakeholders to provide for long term stewardship, ensuring the safety of the surrounding population for as long as the contamination may pose a hazard. We will also ensure that the records of our activities and the materials remaining on site are managed to provide long-term access to this important information.

We will work with the communities where our sites are located to help them transition from economies largely based on the jobs at our sites to other jobs, whether they be manufacturing, information management technologies, biomedical research, or any of a number of other industries than can benefit from our highly trained and highly motivated workers.

We will also work with these communities to properly disposition the government property that may remain at a site following completion of our activities. Such property can range from heavy equipment to computers to office furniture to buildings or land. This property can be a community asset if we work with the community to properly plan its release and reuse. The activities taking place in buildings at the Oak Ridge K-25 site are an excellent example of how these facilities can be used to cost-effectively bring new business into these communities. Other examples include the potential establishment of an “Interpretive Center” at Weldon Spring, the use of part of the Grand Junction site as an Army Reserve Center, and the community purchase and use of the Mound site for economic development.

These responsibilities make us different than industry, and we take these responsibilities very seriously.

## **CONCLUSION**

The Site Closure Program is faced with a number of challenges. But we have mapped out approaches that we believe will enable us to meet these challenges. We will continue to work in partnership with our regulators and other stakeholders, our contractors, and Congress to ensure a focus on site closure that will provide the most cost-effective application of cleanup funds. We pledge to quickly close these sites and allow the communities and the workers to get on with their lives unconcerned with the cold war legacy of contaminated DOE sites.